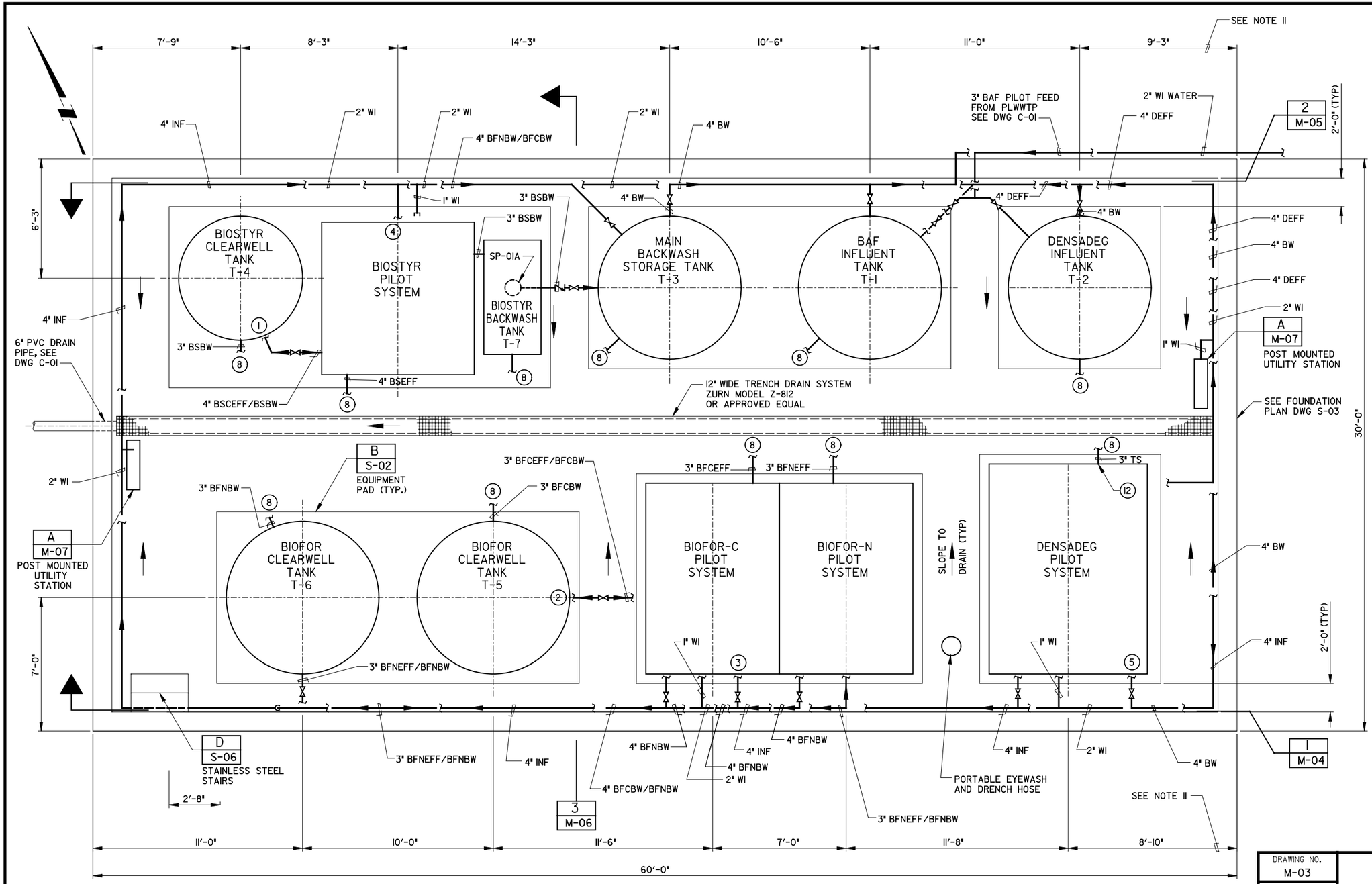


NOTES:

1. MANUFACTURER SHALL CONNECT BIOSTYR PILOT SYSTEM EFFLUENT PIPING TO CLEARWELL TANK.
2. MANUFACTURER SHALL CONNECT BIOFOR PILOT SYSTEMS EFFLUENT PIPING TO CLEARWELL TANK.
3. MANUFACTURER SHALL CONNECT INFLUENT PIPING TO BIOFOR-C PILOT SYSTEM.
4. MANUFACTURER SHALL CONNECT INFLUENT PIPING TO BIOSTYR INFLUENT INLET.
5. MANUFACTURER SHALL CONNECT 4-INCH BACKWASH PIPING TO DENSADEG PILOT SYSTEM.
6. MANUFACTURER SHALL CONNECT 4-INCH BACKWASH PIPING TO BIOFOR-C PILOT SYSTEM.
7. MANUFACTURER SHALL CONNECT 4-INCH BACKWASH PIPING TO BIOSTYR PILOT SYSTEM.
8. FILANC SHALL PROVIDE 3-INCH TANK OVERFLOW AND TANK DRAIN PER DETAIL "F", DWG. M-07.
9. FILANC SHALL COORDINATE SIZING OF CONCRETE PAD WITH MANUFACTURER.
10. CENTER LINES DISTANCES ARE APPROXIMATE PER NOTE 10, DWG G-02
11. FILANC TO FURNISH PORTABLE EYEWASH AND SHOWER.
12. FILANC SHALL PROVIDE AND INSTALL SAMPLE TAP. LOCATIONS AND QUANTITIES SHALL BE COORDINATED WITH DWG M-01 AND FIELD ENGINEER.
13. FILANC SHALL INSTALL PIPE SUPPORTS PER DETAILS D AND E, DWG M-07 AND SPECIFICATION SECTION 15020.

PIPING SHOWN IS SCHEMATIC ONLY. FILANC SHALL COORDINATE ACTUAL ROUTING AND QUANTITIES IN ACCORDANCE WITH DRAWING M-01 AND BROWN AND CALDWELL'S FIELD ENGINEER

DRAWING NO. M-03
SHEET NO. 8

POINT LOMA WASTE WATER TREATMENT PLANT
BIOLOGICAL AERATED FILTER PILOT STUDY

MECHANICAL PLAN

CITY OF SAN DIEGO, CALIFORNIA
SHEET 8 OF 22 SHEETS

WATER W.O. NA
SEWER W.O. NA

P:\CAD\24901-BAF\Building Permit\PtL_M03.dgn
2/4/2005

REGISTERED PROFESSIONAL ENGINEER JOSHUA A. NEWMAN No. 64115 Exp. CIVIL STATE OF CALIFORNIA

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

BROWN AND CALDWELL
SUBMITTED: PROJECT MANAGER DATE:
APPROVED: BROWN AND CALDWELL DATE:
APPROVED: DATE:
SCALE HORIZONTAL 3/8" = 1'-0"
VERTICAL NONE

METROPOLITAN WASTEWATER DEPARTMENT
City of San Diego

DRAWING STATUS

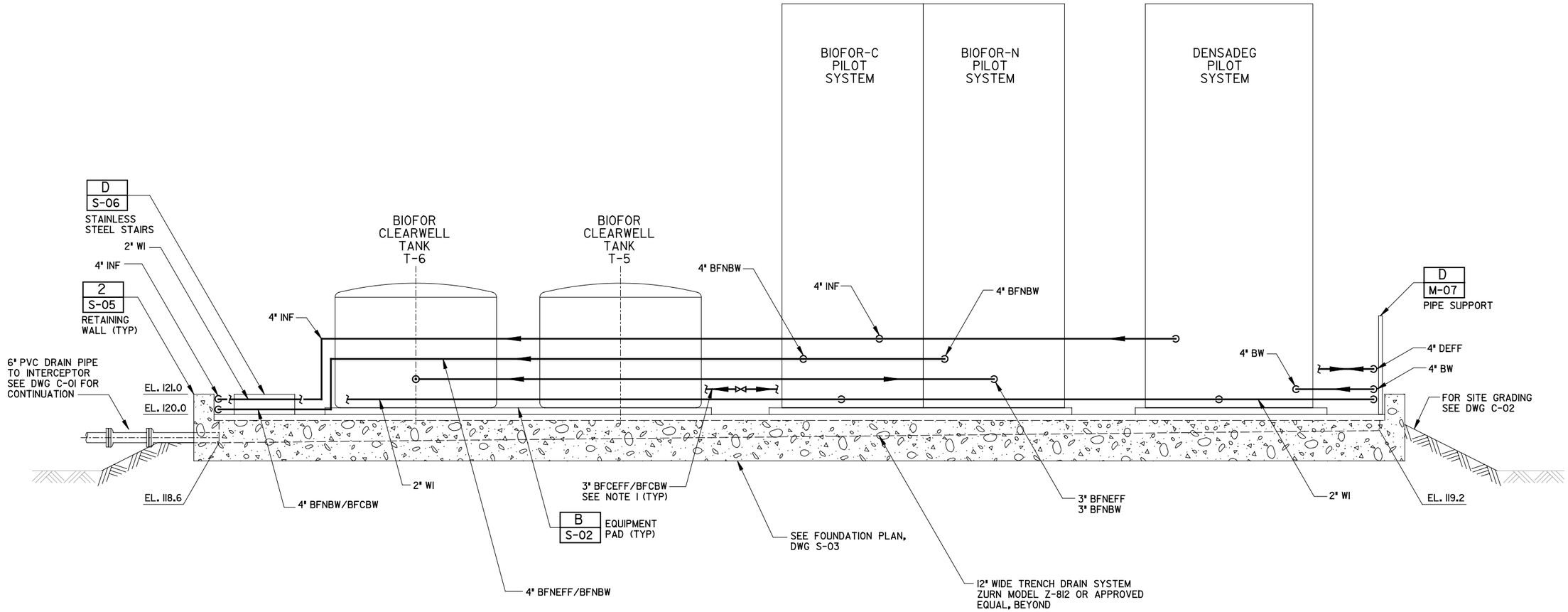
NO.	DATE	REQ.	REVISION DESCRIPTION	DRAWN	CKD	APD	PE	EM	QA/QC

PROJECT MANAGER DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

DESIGN ENGINEER
CONTROL CERTIFICATION
188-1692 LAMBERT COORDINATES
00000-08-D



PIPING SHOWN IS SCHEMATIC ONLY. FILANC SHALL COORDINATE ACTUAL ROUTING AND QUANTITIES IN ACCORDANCE WITH DRAWING M-01 AND BROWN AND CALDWELL'S FIELD ENGINEER

NOTES:

1. PIPE ELEVATIONS SHOWN ARE APPROXIMATE. FILANC SHALL ROUTE PIPING PER BROWN AND CALDWELL'S FIELD ENGINEER'S INSTRUCTIONS.
2. FILANC SHALL INSTALL PIPE SUPPORTS PER DETAILS D AND E, DWG M-07 AND SPECIFICATION SECTION 15020.

DRAWING NO. M-04

SHEET NO. 9

POINT LOMA WASTE WATER TREATMENT PLANT
BIOLOGICAL AERATED FILTER PILOT STUDY

MECHANICAL SECTION 1

CITY OF SAN DIEGO, CALIFORNIA
SHEET 9 OF 22 SHEETS

WATER W.O. NA
SEWER W.O. NA

REGISTERED PROFESSIONAL ENGINEER — JOSEPH A. NEWMAN — No. 64115 — Exp. _____ — CIVIL — STATE OF CALIFORNIA

WARNING
0 1/2 1
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BROWN AND CALDWELL

SUBMITTED: _____ PROJECT MANAGER DATE: _____
APPROVED: _____ BROWN AND CALDWELL DATE: _____
APPROVED: _____ DATE: _____

SCALE — HORIZONTAL 3/8" = 1'-0" — VERTICAL 3/8" = 1'-0"

METROPOLITAN WASTEWATER DEPARTMENT
City of San Diego

DRAWING STATUS

NO.	DATE	REQ.	REVISION DESCRIPTION	DRAWN	CKD	APD	PE	EM	QA/QC

PROJECT MANAGER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED

DESIGN ENGINEER _____

CONTROL CERTIFICATION _____

188-1692 LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

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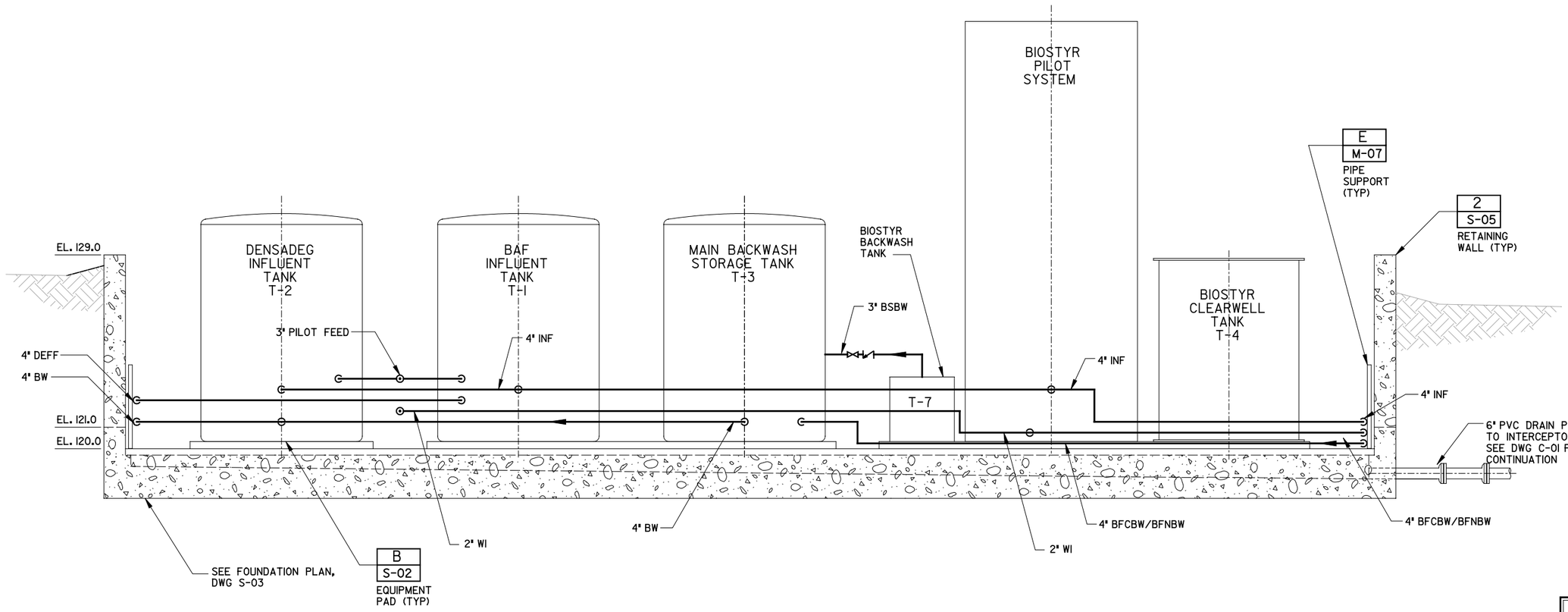
2/4/2005



PIPING SHOWN IS SCHEMATIC ONLY. FILANC SHALL COORDINATE ACTUAL ROUTING AND QUANTITIES IN ACCORDANCE WITH DRAWING M-01 AND BROWN AND CALDWELL'S FIELD ENGINEER

NOTES:

1. PIPE ELEVATIONS SHOWN ARE APPROXIMATE. FILANC SHALL ROUTE PIPING PER BROWN AND CALDWELL'S FIELD ENGINEER'S INSTRUCTIONS.
2. FILANC SHALL INSTALL PIPE SUPPORTS PER DETAILS D AND E, DWG M-07 AND SPECIFICATION SECTION 15020.
3. FILANC TO FURNISH TWO (2) IDENTICAL SUBMERSIBLE PUMPS. ONE PUMP SHALL BE INSTALLED IN BIOSTYR BACKWASH TANK T-7, WHILE THE SECOND PUMP WILL BE STORED AT PLWWTP AS A SPARE.

DRAWING NO. M-05
SHEET NO. 10

POINT LOMA WASTE WATER TREATMENT PLANT
BIOLOGICAL AERATED FILTER PILOT STUDY

MECHANICAL SECTION 2

CITY OF SAN DIEGO, CALIFORNIA
SHEET 10 OF 22 SHEETS

WATER W.O. NA
SEWER W.O. NA

REGISTERED PROFESSIONAL ENGINEER JOSHUA A. NEWMAN No. 64115 Exp. CIVIL STATE OF CALIFORNIA

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

BROWN AND CALDWELL
SUBMITTED: _____ PROJECT MANAGER DATE: _____
APPROVED: _____ BROWN AND CALDWELL DATE: _____
APPROVED: _____ DATE: _____
SCALE HORIZONTAL 3/8" = 1'-0"
VERTICAL 3/8" = 1'-0"

METROPOLITAN WASTEWATER DEPARTMENT
City of San Diego

DRAWING STATUS

NO.	DATE	REQ.	REVISION DESCRIPTION	DRAWN	CKD	APD	PE	EM	QA/QC

PROJECT MANAGER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED

DESIGN ENGINEER _____
CONTROL CERTIFICATION _____
188-1692 LAMBERT COORDINATES
CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____
00000-10-D

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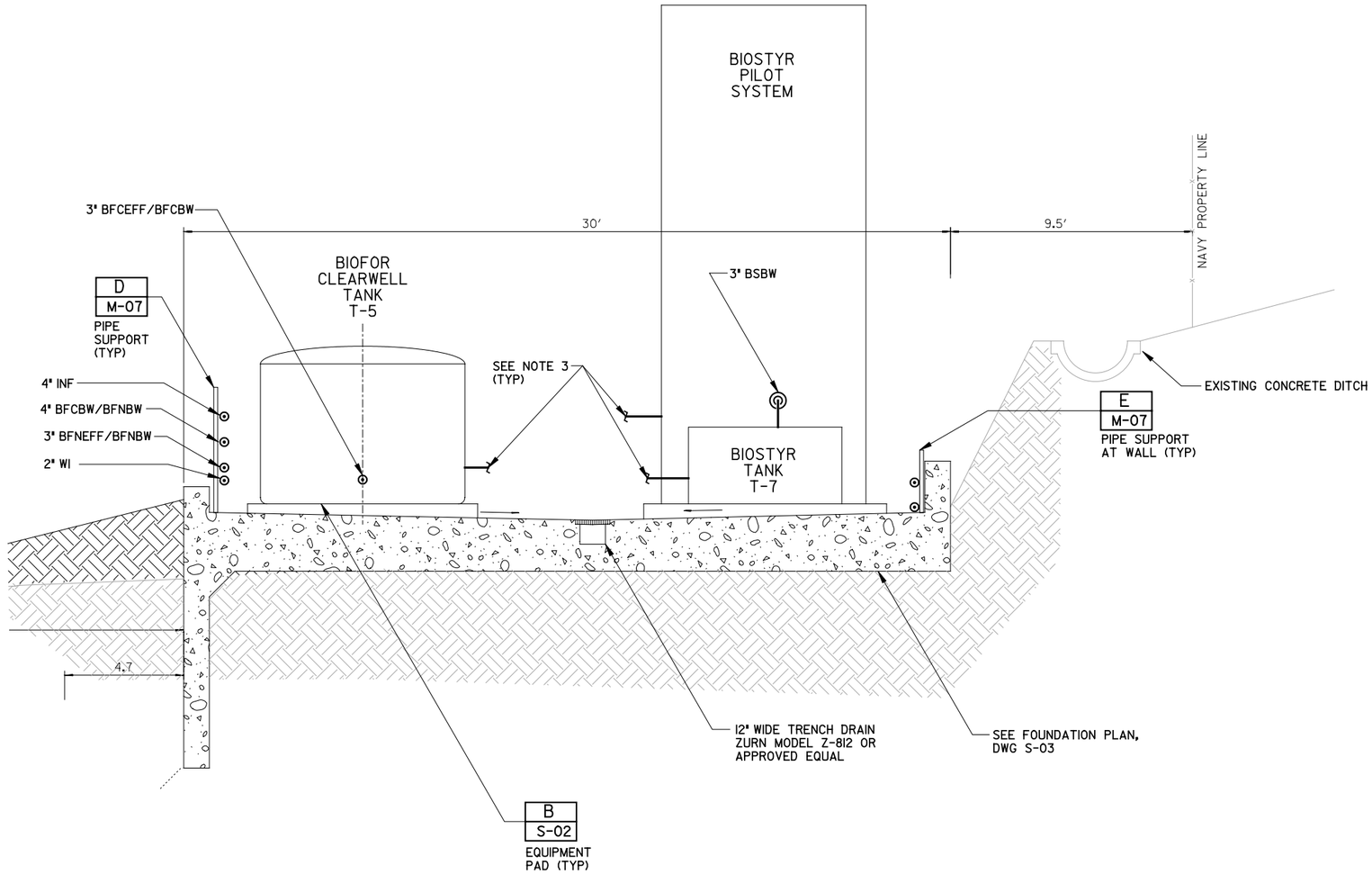

PIPING SHOWN IS SCHEMATIC ONLY. FILANC SHALL COORDINATE ACTUAL ROUTING AND QUANTITIES IN ACCORDANCE WITH DRAWING M-01 AND BROWN AND CALDWELL'S FIELD ENGINEER

NOTES:

1. PIPE ELEVATIONS SHOWN ARE APPROXIMATE. FILANC SHALL ROUTE PIPING PER BROWN AND CALDWELL'S FIELD ENGINEER'S INSTRUCTIONS.
2. FILANC SHALL INSTALL PIPE SUPPORTS PER DETAILS D AND E, DWG M-07 AND SPECIFICATION SECTION 15020.
3. FILANC SHALL PROVIDE 3-INCH TANK OVERFLOW AND TANK DRAIN PER DETAIL 'F', DWG. M-07.

DRAWING NO. M-06
SHEET NO. 11

POINT LOMA WASTE WATER TREATMENT PLANT
BIOLOGICAL AERATED FILTER PILOT STUDY

MECHANICAL SECTION 3

CITY OF SAN DIEGO, CALIFORNIA
SHEET 11 OF 22 SHEETS

WATER W.O. NA
SEWER W.O. NA

PROJECT MANAGER ____ DATE ____

DESCRIPTION	BY	APPROVED	DATE	FILMED

DESIGN ENGINEER

CONTROL CERTIFICATION

188-1692
LAMBERT COORDINATES

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

00000– 11 –D

REGISTERED PROFESSIONAL ENGINEER
JOSHUA A. NEWMAN
No. 64115
Exp. ____
CIVIL
STATE OF CALIFORNIA

WARNING
0 1/2 1
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BROWN AND CALDWELL

SUBMITTED: ____ PROJECT MANAGER DATE: ____
APPROVED: ____ BROWN AND CALDWELL DATE: ____
APPROVED: ____ DATE: ____

SCALE
HORIZONTAL 3/8" = 1'-0"
VERTICAL 3/8" = 1'-0"

METROPOLITAN WASTEWATER DEPARTMENT
City of San Diego

DRAWING STATUS

NO.	DATE	REQ.	REVISION DESCRIPTION	DRAWN	CKD	APD	PE	EM	QA/QC

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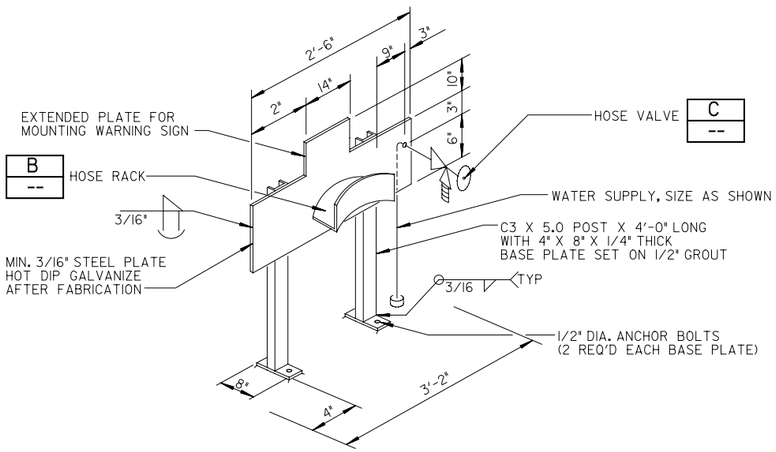
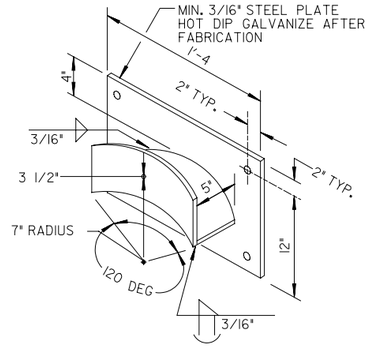
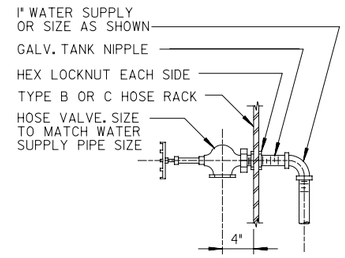


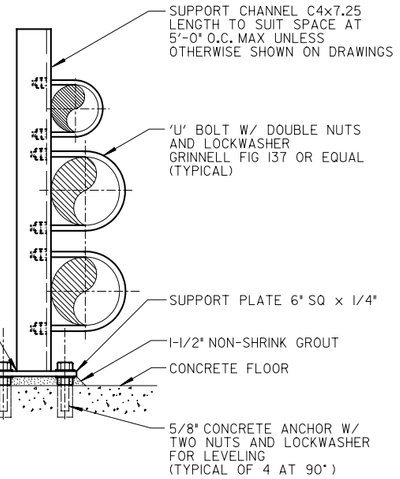
POST MOUNTED UTILITY STATION — A — VAR
NO SCALE



HOSE RACK — B — VAR
NO SCALE

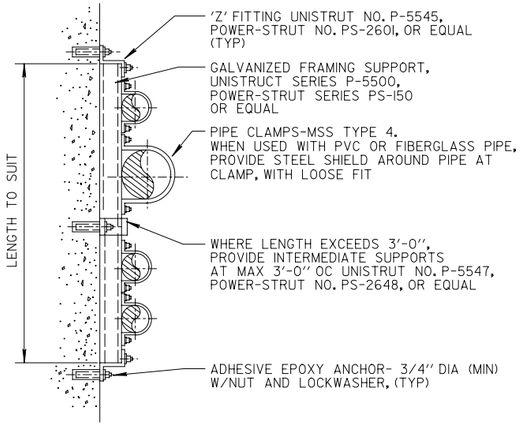


HOSE VALVE — C — VAR
NO SCALE



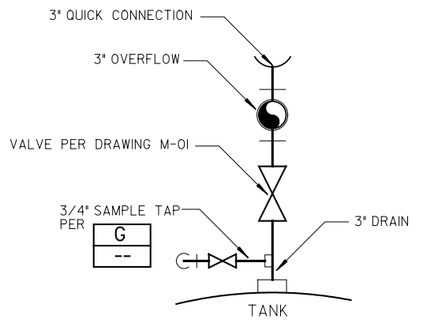
NOTES:
1. SEE SPECIFICATION SECTION "PIPE SUPPORTS" FOR MATERIALS AND ADDITIONAL REQUIREMENTS.
2. VERTICAL HEIGHT OF PIPE SUPPORT SHOULD NOT EXCEED 6 FT.

UPRIGHT PIPE SUPPORT — D — VAR
NO SCALE

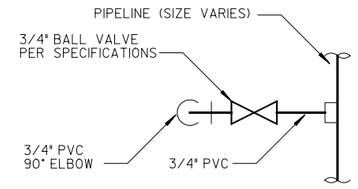


NOTE:
1. SEE SPECIFICATION SECTION "PIPE SUPPORTS" FOR MATERIALS AND ADDITIONAL REQUIREMENTS.

FLUSH MOUNTED PIPE SUPPORT — E — VAR
NO SCALE



TANK DRAIN AND OVERFLOW — F — VAR
NO SCALE



NOTE:
1. FILANC SHALL PROVIDE AND INSTALL SAMPLE TAP. LOCATIONS AND QUANTITIES SHALL BE COORDINATED WITH DRAWING M-01 AND BROWN AND CALDWELL'S FIELD ENGINEER.

TANK DRAIN AND OVERFLOW — G — VAR
NO SCALE

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2/4/2005

REGISTERED PROFESSIONAL ENGINEER — JOSHUA A. NEWMAN — No. 64115 — Exp. ____ — CIVIL — STATE OF CALIFORNIA

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

BROWN AND CALDWELL
SUBMITTED: _____ PROJECT MANAGER DATE: _____
APPROVED: _____ BROWN AND CALDWELL DATE: _____
APPROVED: _____ DATE: _____
SCALE — HORIZONTAL NO SCALE — VERTICAL NO SCALE

METROPOLITAN WASTEWATER DEPARTMENT
City of San Diego

DRAWING STATUS

NO.	DATE	REQ.	REVISION DESCRIPTION	DRAWN	CKD	APD	PE	EM	QA/QC

DRAWING NO. M-07
SHEET NO. 12

POINT LOMA WASTE WATER TREATMENT PLANT
BIOLOGICAL AERATED FILTER PILOT STUDY

MECHANICAL DETAILS

CITY OF SAN DIEGO, CALIFORNIA
SHEET 12 OF 22 SHEETS

WATER W.O. NA
SEWER W.O. NA

PROJECT MANAGER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

DESIGN ENGINEER
CONTROL CERTIFICATION
188-1692 LAMBERT COORDINATES
00000-12-D

FOUNDATION:

1. PRIOR TO THE CONTRACTOR REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE GEOTECHNICAL ENGINEER SHALL INSPECT AND APPROVE THE FOOTING EXCAVATIONS. HE SHALL POST NOTICE ON THE JOB SITE AND ADVISE THE BUILDING INSPECTOR IN WRITING THAT THE WORK SO INSPECTED MEETS THE CONDITIONS OF THE REPORT. A WRITTEN CERTIFICATION TO VERIFY THAT:
   A. THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOIL REPORT.
   B. THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED, AND
   C. THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE SOILS REPORT.

   (AVAILABLE FROM THE CITY FOR REVIEW)
2. SOILS REPORT PREPARED BY:
   PRELIMINARY GEOTECHNICAL EVALUATION
   BAF PILOT PLANT
   POINT LOMA WASTEWATER TREATMENT PLANT
   SAN DIEGO, CALIFORNIA
   PROJECT NO. 105123001, NOVEMBER 12,2003
3. SOIL REMOVAL AND RECOMPACTION SHALL BE DONE PER SOILS REPORT RECOMMENDATIONS UNDER GEOTECHNICAL ENGINEER'S SUPERVISION AND INSPECTION.
4. TYPE OF FOOTING:
   A. SHALLOW FOOTING SYSTEM MINIMUM EMBEDMENT 18" BELOW LOWEST ADJACENT GRADE.
   DESIGN SOIL PRESSURE:

FOOTING TYPE	STATIC BEARING PRESSURE
MAT FOUNDATION	3,000 P.S.F.

5. SLAB BASE AND COMPACTION TO BE IN ACCORDANCE WITH SOILS REPORT.
6. NO PIPES OR DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ENGINEER.
7. FOR ALL DIMENSIONS, CURBS, SLAB DEPRESSIONS, STEPS, FLOOR DRAINS, FLOOR SINKS, TRENCHES, UNDERFLOOR DUCTS AND CONDUITS, SEE ARCHITECTURAL, MECHANICAL, REFRIGERATION, AIR CONDITIONING, PLUMBING, ELECTRICAL, AND FOODSERVICE DRAWINGS, TRENCH BACKFILL AS PER SOILS REPORT REQUIREMENTS.
8. ALL WALLS RETAINING EARTH SHALL DRAIN TO DAYLIGHT OR OTHER DRAINAGE.
9. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
10. THE CONTRACTOR SHALL DETERMINE THE LOCATION OF UTILITY SERVICES IN AREAS TO BE EXCAVATED BEFORE BEGINNING EXCAVATION. EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING. DAMAGE CAUSED AS A RESULT OF FAILING TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL PROVIDE FOR THE DESIGN, APPROVALS, PERMITS, INSTALLATION AND MONITORING OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN TEMPORARY EXCAVATIONS.
12. ALL PLANTERS IN CLOSE PROXIMITY TO THE STRUCTURE SHALL HAVE ADEQUATE DRAINAGE OF SURFACE WATER TO PREVENT SATURATION OF SOIL UNDER FOUNDATION.
13. 1998 C.B.C. SEISMIC SOIL CATEGORIZATION (SECTION 1636.2)
    SEISMIC ZONE: 4
    ZONE FACTOR: 0.4
    SOIL PROFILE TYPE S_C

REINFORCING STEEL:

1. ALL REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE C.B.C., AND THE "MANUAL OF STANDARD PRACTICE" BY THE C.R.S.I. OR AS MODIFIED BY THE CONSTRUCTION DOCUMENTS.
2. REINFORCING BARS SHALL CONFORM TO A.S.T.M. A-615, DEFORMED GRADE 60, EXCEPT #3 BARS MAY BE GRADE 40. REINFORCING BARS THAT ARE TO BE WELDED SHALL CONFORM TO A.S.T.M. A-706, DEFORMED GRADE 60.
3. WELDING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH A.S.T.M. A-706 WITH LOW HYDROGEN ELECTRODES AND SHALL CONFORM TO C.B.C. STANDARD 19-1 AND STRUCTURAL WELDING CODE REINFORCING STEEL BY A.N.S.I. / A.W.S. D1.4. MINIMUM TENSILE STRENGTH OF WELD METAL SHALL BE 90 K.S.I. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.
4. ALL REINFORCING BAR BENDS SHALL BE MADE COLD, UNLESS OTHERWISE PERMITTED BY THE BUILDING OFFICIAL.
5. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A-185, AND SHALL BE LAPPED 1 SPACES AND 12" MINIMUM.
6. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE LAPPED WITH THE SAME GRADE, SIZE, SPACING AND NUMBER AS THE VERTICAL REINFORCEMENT, RESPECTIVELY.
7. REINFORCING SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS.
8. ALL VERTICAL REINFORCING SHALL BE CONTINUOUS BETWEEN TWO LEVELS, UNLESS NOTED OTHERWISE.
9. SLAB ON GRADE REINFORCING SHALL BE POSITIONED AT MID-DEPTH, UNLESS NOTED OTHERWISE.
10. PROVIDE #3 SPACER TIES AT 2'-6" ON CENTER IN ALL BEAMS AND FOOTINGS TO SECURE REINFORCING BARS IN PLACE, U.O.N.
11. ALL REBAR SIZES ON THESE DRAWINGS ARE IN POUND - INCH UNITS.
12. PIPING AND CONDUIT SHALL BE SO FABRICATED AND INSTALLED THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS PROPER LOCATION WILL NOT BE REQUIRED. A.C.I. #6.3.12

STEEL:

1. FABRICATION AND ERECTION TO CONFORM TO A.I.S.C. LATEST EDITION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS" AND "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" EXCEPT AS OTHERWISE SHOWN OR SPECIFIED.
2. QUALIFIED AND CERTIFIED WELDERS SHALL BE USED FOR ALL WELDING. WELDING TO BE PERFORMED IN THE SHOP OF A STATE LICENSED FABRICATOR. ALL WELDING TO CONFORM TO THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE A.W.S. D1.1.
3. MATERIALS:

STRUCTURAL STEEL SHAPES	A.S.T.M. A-572, GRADE 50
STRUCTURAL STEEL PLATES	A.S.T.M. A-36
STRUCTURAL STEEL PIPES	A.S.T.M. A53 TYPE E OR S, GRADE B
WELDING ELECTRODES	A.W.S. A-5.1 OR A-5.5.
ANCHOR BOLTS	A.S.T.M. A-307
TYPICAL STEEL CONNECTION BOLTS	A.S.T.M. A-325
MISCELLANEOUS BOLTS	A.S.T.M. A-325
GALVANIZING	A.S.T.M. A-123
RUST-INHIBITING PRIMER	TT-P-645 A.S.T.M.
STEEL TUBING	A.S.T.M. A-500, GRADE B (Fy = 46 K.S.I.)

4. ALL STRUCTURAL STEEL AND CONNECTORS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO ASTM A-123 AND ASTM A-153. TOUCH UP DAMAGED GALVANIZING WITH GALLVALLOY IN CONFORMANCE WITH ASTM A780 AFTER ERECTION IS COMPLETE.
5. CONNECTED MEMBERS SHALL BEAR ONLY UPON UNTHREADED PORTIONS OF BOLTS.
6. BURNING OF HOLES IS NOT ALLOWED.
7. INSPECTION OF WELDING SHALL CONFORM TO C.B.C. REQUIREMENTS (CHAPTER 17).
8. THE STRUCTURAL STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
9. BOLT HOLES SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED, UNLESS NOTED OTHERWISE.
10. ALL STRUCTURAL STEEL SURFACES TO RECEIVE SPRAY-APPLIED FIREPROOFING OR TO BE ENCASED IN CONCRETE OR MASONRY SHALL BE LEFT UNPAINTED.
11. STRUCTURAL STEEL SHALL BE DELIVERED TO THE JOB SITE FREE OF EXCESSIVE RUST, MILL SCALE, GREASE, ETC.
12. OPENING SHALL NOT BE PLACED IN STEEL MEMBERS UNLESS SPECIFICALLY DETAILED.

CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF A.C.I. 318 (CURRENT EDITION) "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 350R- "ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES", EXCEPT AS MODIFIED BY THE SUPPLEMENTAL REQUIREMENTS CONTAINED HEREIN OR SHOWN ON THE DRAWINGS.
2. ALL CONCRETE SHALL BE 150 P.C.F. HARDROCK, MIXED PER A.S.T.M. C-94, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 P.S.I. AT 28 DAYS.
3. THE MAXIMUM SIZE AGGREGATE IN FOUNDATION AND MASS CONCRETE WORK SHALL BE 1-1/2 INCH. THE MAXIMUM SIZE AGGREGATE IN SLABS ON GRADE, WALLS, AND ALL OTHER CONCRETE SHALL BE 3/4" INCH.
4. CEMENT SHALL CONFORM TO A.S.T.M.. C-150, TYPE III, HIGH-EARLY-STRENGTH. AGGREGATES FOR NORMAL WEIGHT SHALL CONFORM TO A.S.T.M. C-33, 1 1/2" MAXIMUM SIZE.
5. ADMIXTURES AND COLORS (EXCEPT AS NOTED HEREIN) SHALL NOT BE USED UNLESS SUBSTANTIATING DATA IS SUBMITTED TO AND ACCEPTED BY THE ENGINEER OF RECORD.
6. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY. THE MIX DESIGNS SHALL CONFORM TO C.B.C. SEC. 1905. UNLESS NOTED OTHERWISE.
7. NON-STRUCTURAL STEEL EMBEDDED IN CONCRETE SHALL BE 316 STAINLESS STEEL.
8. PROVIDE 2- #5 DIAGONAL BARS AT CORNERS OF WALL, FLOOR, AND ROOF OPENINGS AND INSIDE CORNERS OF FLOORS.
9. PROVIDE WATERSTOPS IN ALL BELOW GRADE FOUNDATION WALL CONSTRUCTION JOINTS.
10. READY MIXED CONCRETE SHALL CONFORM TO (A.S.T.M. C-94).
11. PLACEMENT OF CONCRETE SHALL CONFORM TO A.C.I. 304. CLEAN AND ROUGHEN TO 1/4" AMPLITUDE FOR ALL CONCRETE SURFACES AGAINST WHICH CONCRETE IS TO BE PLACED.
12. ALL EXPOSED CONCRETE SHALL HAVE A SMOOTH FORM FINISH USING B-B PLYFORM, CLASS I, EXT-A.P.A. PLYWOOD.
13. ALL SLABS SHALL HAVE A TROWELED FINISH EXCEPT AS NOTED ON THE DRAWINGS.
14. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
15. IF THE CONTRACTOR DESIRES TO MAKE ANY CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THESE DRAWINGS, HE SHALL SUBMIT DETAILS OF CHANGES TO THE ENGINEER OF RECORD FOR REVIEW BEFORE STARTING WORK.
16. NO BRICK OR POROUS MATERIAL SHALL BE USED TO SUPPORT FOUNDATION STEEL OFF THE GROUND.
17. PROVIDE 3/4 INCH CHAMFER ON ALL EXPOSED CONCRETE CORNERS, U.N.O.
18. SLEEVE PLUMBING OPENINGS IN SLABS WITH NON-CORROSIVE SLEEVE BEFORE PLACING CONCRETE AND BEND REINFORCING AROUND SLEEVES.
19. ALL REINFORCING BARS SHALL BE PROVIDED WITH THE FOLLOWING CONCRETE MINIMUM COVER:

FOOTINGS CAST AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER	2"
BEAMS AND GIRDERS	1 1/2"
WALLS	1 1/2"
COLUMN TIES	1 1/2"
SLABS (#11 AND SMALLER)	3/4"

20. CONCRETE CURING: TYPICALLY REQUIRED FOR 7 DAYS. REFER TO SPECIFICATION SECTION 03300 FOR DETAILS.

LATERAL LOADS:

1. SEISMIC ZONE 4

   SEISMIC SOURCE TYPE B
   DISTANCE TO CRITICAL SOURCE < 10 Km
   Ca = 0.40
   Na = = 1.0
   Cv = 0.56
   Nv = 1.0
2. BASIC WIND SPEED & EXPOSURE:
   70 M.P.H.
   EXPOSURE "C"

GENERAL NOTES:

1. THE PROJECT SPECIFICATIONS SHALL BE PART OF THE CONTRACT DOCUMENTS.
2. THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH MECHANICAL DRAWINGS BY: BROWN & CALDWELL.
3. THE CONTRACTOR SHALL REVIEW EXISTING CONDITIONS ON THE SITE DURING THE BIDDING. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK. THE ENGINEERS SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES PRIOR TO PROCEEDING.
4. UNLESS OTHERWISE SHOWN OR NOTED, ALL PHASES OF WORK ARE TO CONFORM TO THE MINIMUM STANDARDS OF THE CALIFORNIA BUILDING CODE (LATEST EDITION C.B.C.), RELATED STANDARDS, AND ANY A.S.T.M. SPECIFICATIONS WHICH THESE STANDARDS ARE BASED. WHERE CONFLICT BETWEEN BUILDING CODES AND SPECIFICATIONS OCCUR, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
5. ALL A.S.T.M. DESIGNATIONS REFERRED TO ON THESE DRAWINGS SHALL BE THE LATEST ADOPTED OR REVISED SPECIFICATION, AS OF THE DATE OF THESE DRAWINGS.
6. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS. DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES.
7. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
8. THE STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL REQUIREMENTS. REFER TO ARCHITECTURAL, CIVIL AND MECHANICAL DRAWINGS FOR NON-STRUCTURAL ITEMS, SUCH AS:
   A. SIZE AND LOCATION OF ALL OPENINGS.
   B. DIMENSION NOT SHOWN ON STRUCTURAL DRAWINGS.
   C. EQUIPMENT ANCHORAGE.
   D. FLOOR, ROOF AND WALL FINISHES
9. THE STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
10. SATISFACTORY EXECUTION OF CONSTRUCTION IS DEPENDENT UPON CONFORMANCE WITH THE INTENT OF THESE DRAWINGS. OWNER OR CONTRACTOR SHALL RETAIN A CALIFORNIA LICENSED CIVIL OR STRUCTURAL ENGINEER DURING CONSTRUCTION TO OBSERVE THE CONSTRUCTION AND STATE THAT THE STRUCTURE HAS BEEN BUILT IN GENERAL CONFORMANCE WITH THE INTENT OF THESE DRAWINGS.
11. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED FLOORS OR ROOF. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD FOR EACH PARTICULAR LEVEL. WHEN WEIGHT OF MATERIALS OR EQUIPMENT MAY EXCEED DESIGN LOAD, STRUCTURAL SYSTEMS SHALL BE SHORED.
12. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK. THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
13. NO PIPES OR DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY ENGINEER

DESIGN BASIS:

CODE: 2001 C.B.C. (CALIFORNIA BUILDING CODE TITLE) CCR, TITLE 24, PART 2 AS ADOPTED BY THE CITY OF SAN DIEGO JULY 19, 1999, AND FILED UNDER DOCUMENT NO. D-769840 ACCORDING TO CITY ORDINANCE NO. O-18656.

GRAVITY LOADS:

1. FLOOR LIVE LOAD 125 PSF (REDUCIBLE)

DRAWING NO. S-01
SHEET NO. 13

POINT LOMA WASTE WATER TREATMENT PLANT
BIOLOGICAL AERATED FILTER PILOT STUDY

TYPICAL STRUCTURAL NOTES - 1

CITY OF SAN DIEGO, CALIFORNIA
SHEET 13 OF 22 SHEETS

WATER W.O. NA
SEWER W.O. NA

PROJECT MANAGER ____ DATE ____

DESCRIPTION	BY	APPROVED	DATE	FILMED

DESIGN ENGINEER ____
CONTROL CERTIFICATION ____
188-1692 LAMBERT COORDINATES

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

00000- 13 -D

REGISTERED PROFESSIONAL ENGINEER
SIMON WONG
NO. 2906
EXP. 6-30-04
STRUCTURAL
STATE OF CALIFORNIA

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

BROWN AND CALDWELL

SUBMITTED: ____ PROJECT MANAGER ____ DATE: ____
APPROVED: ____ BROWN AND CALDWELL ____ DATE: ____
APPROVED: ____ DATE: ____

SCALE HORIZONTAL NONE
VERTICAL NONE

METROPOLITAN WASTEWATER DEPARTMENT
City of San Diego

DRAWING STATUS

NO.	DATE	REQ.	REVISION DESCRIPTION	DRAWN	CKD	APD	PE	EM	QA/QC

P:\CAD\24901-BAF\Building Permit\PdL-S01.dgn
2/4/2005